The Cultural Intelligence Level Among International Students In Jordanian Universities

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Abstract

This study investigated the level of cultural intelligence among international students and whether significant statistical differences could be found in their cultural intelligence at the level (a = 0.05) due to the students' gender and the nationality. To achieve the study aims, a cultural intelligence scale were adopted (Yordonova, 2011). The scale consisted of 20 items distributed on a four\subscale. The study sample consisted of 169 male and female students from various nationalities, purposefully selected from a group enrolled in teaching Arabic for non-native speakers' program in the language centers of the University of Jordan and Yarmouk University in the second semester of 2012/2013 academic year. The study results revealed that the students' cultural intelligence level was high. The results also showed that no statistical significant differences existed due to gender. Statistical differences were found, however, due to nationality in the favor of American students.

Introduction

Because of advances in technology and globalization, cultural intelligence has attracted psychologist and educators alike in the 21st century when considering the increased interaction among people from diverse cultural backgrounds. With increased interactions among different cultures, greater opportunity exists for cultural differences to create a level of cultural intelligence (Ramirez, 2010). Cultural intelligence refers to capability that allows individuals to understand and act appropriately across a wide range of cultures. The ability to interact effectively in multiple cultures recently was labeled cultural intelligence (CQ). Crowne (2008) defined CQ as a

"multifaceted competency consisting of cultural knowledge, the practice of mindfulness, and the repertoire of behavioral skills." The term cultural intelligence refers to an individual's ability to successfully adapt to new and unfamiliar cultural settings and the capacity to function easily and effectively in situations characterized by cultural diversity (Earley & Ang, 2003; Ang,Van Dyne, Koh, and Ng, 2007). Cultural intelligence, defined as one's knowledge or control over cognitions, leads to deep information processing relating to culture (Ang,Van Dyne, Koh, and Ng, 2004). Sri Ramalu, Wei, and Rose (2011) argue that meta-cognitive of cultural intelligence is the individual's cultural conscious and awareness and, thus, is manifested in the ability to question cultural assumptions. Relevant capabilities include planning, monitoring, and revising mental models of cultural norms for countries or groups of people (Sri, et al., p.60**).** It is thought to be a "culture-free construct that applies across specific cultural circumstances" (Ng & Earley, 2006, p. 10). Peterson stated that CQ "is the ability to engage in a set of behaviors that uses skills (i.e., language or interpersonal skills) and qualities (e.g., tolerance for ambiguity, flexibility) that are tuned appropriately to the culture-based values and attitudes of the people with whom one interacts" (as cited in Crown, 2008, p. 329).

According to Thomas, the importance of learning about your own culture and other cultures leads to the capability to understand your personal behavior, as well as other's behavior (as cited in Khani & Abzari, 2011). Additionally, people can become knowledgeable of other cultures through different venues (e.g., traveling, studying, reading, or viewing television programs). A person can also become familiar with other cultures by interacting with individuals from different cultures. Some cultural exposures, however, are more significant than others. For example, more significant means of gaining international understanding

include jobs or suppliers, short visits to international organizations (Crowne, 2008, p. 393). To be culturally intelligent (from now on referred to as CQ) means to " be skilled and flexible about understanding a culture, learning more about it with your ongoing interactions with it, and gradually reshaping your thinking to be more sympathetic to the culture and your behavior to be more skilled and appropriate when interacting with others from the culture" (Yordonova, 2011, p. 4). in sum, Cultural intelligence: cultural intelligence is defined in this study by participant acquired grade on Yordonova scale of four domains.

Based on the definition of CQ and what effective cultural interaction is, it is important to look at the components of CQ. Earley and Ang (2003) had derived CQ as a multidimensional construct that is composed of four facet that are: metacognition, cognition , motivation and behavior. Meta-Cognition Cultural Intelligence (CQ): this refers to one's cultural awareness during intercultural interactions. While Cognitive Cultural Intelligence (CQ) refers to knowledge of an individual acquired through personal experience. Motivation Cultural Intelligence (CQ) this engages a person's interest in learning and functioning in cross-cultural situations. Furthermore, Motivation is the individual drive that stimulates people to experience new situations that further influence one's desire to interact with culturally different others Finally, Behavioral Cultural Intelligence (CQ) this is an individual's ability to show the appropriate behaviors when interacting with others from a different cultural background. CQ requires having in one's behavioral repertoire responses needed for a given situation" (Yordonova, 2011, p. 7).

To date, no educational research has focused solely upon understanding the cultural intelligence perspectives of international students in Jordan. It is worth developing a

deeper understanding about how culture influences students' cultural intelligence.

The Study Problem

Educators encourage student exchange programs among nations to increase learning, promote cross-cultural awareness, and develop global knowledge skills. Cultural intelligence needs further exploration to understand and explain the existing phenomena and to eventually find a solution. Furthermore, this study investigates whether cultural intelligence is related to the student's culture. The research is designed to answer the following two questions:

1. What is the level of cultural intelligence among international students in Jordan's universities?
2. How does international students' cultural intelligence differ by gender and by nationality?

Related Literature

It is significant that cultural intelligence affects the cultural differences that could cause confrontation between cultures. It is important to understand the level of cultural intelligence so people can more easily and openly understand each other. This research builds on related literature to examine how levels of cultural intelligence relate cultural background. Ang, et al. (2004) investigated relationships between "Big Five" personality and the 4-factor model of cultural intelligence (CQ): met- cognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ. The "Big Five" personality traits include: extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience. The researchers found openness to experiences as the only Big Five that was significantly related to all four aspects of CQ. Balogh, Gaal, and Szabo (2011) examined the relationship between organizational culture and cultural intelligence. Their study

focused on a desired organizational culture in which undergraduate students would like to work. Researchers concluded that students with high cultural intelligence would like to work at a flexible company with an external focus.

Crowne (2008) conducted a study about what leads to cultural intelligence. The resulting study showed that "certain types of exposures to other cultures (such as education abroad and employment abroad) and the level of exposure from these experiences increases cultural intelligence" (p. 391).

A study conducted by Amiri, Moghimi, and Kazemi (2010) examined the relationship between cultural intelligence and employees' performance in a multicultural environment. Findings indicate a significant relationship exists between meta-cognitive, cognitive, and motivational aspects of cultural intelligence and employees' performance. The researchers recommended paying more attention to such ability in employees' performance. In the same area, Vedadi1, Kheiri, and Abbasalizadeh (2010) examined the relationship between cultural intelligence and achievement in Iran. The findings indicated a high correlation between cultural intelligence and its different cultural intelligence, such as knowledge, motivation, and behavior. Khani, Etebarian, and Abzari (2011) investigated the relationship between cultural intelligence and its facets with group effectiveness in a steel company in Iran. The resulting study showed that cultural intelligence and its facets (meta-cognition, cognition, motivation, and behavior) have significant and direct relationship with group effectiveness. Also, motivation and behavior facets can predict group effectiveness (Khani, Etebarian, & Abzari, p. 7507).

Method

Survey research design was used to enable the researcher to gather information about a population, based on a

representative sample drawn from that population, and to generalize survey data to the entire population ((Gay & Airasian, 2009, p. 176). The survey research design showed the most effective research method of data collection that can be generalized to a larger population, as well as being time and cost effective. A stratified random sample from five nationalities was used. The study sample consisted of 169 male and female students from various nationalities, purposefully selected from students enrolled in teaching Arabic for non-native speakers' program in the language centers of the University of Jordan and Yarmouk University in the second semester of the 2012/2013 academic year. Table 1 shows students distribution by nationality and sex. The surveys were administered in students classrooms and took approximately 20 minutes for the students to complete.

Table 1
Student Participations Based on Sex and Nationality

Variable		Total
Gender	Male	68
	Female	101
	Total	169
Nationality	American	31
	Korean	19
	Chinese	16
	Malaysian	52
	European	51
	Total	169

As shown in Table 1, the study group consisted of 101 female and 68 male students. The nationalities represented included 52 students from Malaysia, 51 from the European Union, 31 from the United States, 19 from Korea, and 16 from China.

Instruments

To measure cultural intelligence, the researcher used 20-item scale, developed by Yordonova (2011), and cultural intelligence (CQ), composed of four parts: meta-cognition CQ, motivational CQ, cognitive CQ, and Behavioral (CQ). The researcher measured using a 5-point Likert scale type from 1=SD to 5=SA.

Validity of Yordonova scale

The original CQS consists of twenty questionnaire items which are distributed as following: four items for metacognitive CQ; six items for cognitive CQ; five items for motivational CQ; and five items for behavioral CQ. In order to conclude on the validity of the scale, it was tested across samples, across time and across countries. In sum, the cross validation analyses show strong validity, stability and reliability of the scale (Yordonova, 2011 p. 7).

Content Validity

To ensure research instrument validity, the scale was submitted to five refereed psychology professors at Yarmouk University to evaluate, revise, and clarify the questionnaire. Based on their comments and recommendations, several modifications were made to increase the instrument's accuracy. Table 2 shows the Pearson Correlation Value between cultural intelligence and total-scale Pearson correlations.

Table 2
Pearson Correlation Value Between Cultural Intelligence and Total Scale Pearson Correlations

		Total	MECQ	MCQ	MOCQ	BCQ
Total	Pearson Correlation	1	0.836**	0.873**	0.864**	0.842**
Meta-cognitive	Pearson Correlation		1	0.659**	0.665**	0.546**
Cognitive CQ	Pearson Correlation			1	0.761**	0.604**
Motivational CQ	Pearson Correlation				1	0.625**
Behavioral CQ	Pearson Correlation					1

Note. ** Correlation is significant at the 0.01 level (2-tailed).

Reliability

Cronbach's alpha was established to estimate internal consistency and reliability and to determine the difference among the international students. Cronbach's alpha was 0.92 for the entire sample, while the value was 0.72 for meta-cognitive cultural intelligence; 0.61 for cognitive cultural intelligence; 0.71 for motivational cultural intelligence; and 0.77 for behavioral cultural intelligence. These values were considered satisfactory for this study's purpose.

Data Analysis

Descriptive statistics were used to analyze the collection data, such as means and standard deviations (3-way MANOVA). Additionally, the study was used to determine if any difference exists among international students' total cultural intelligence measure. To answer the first question about what is the cultural intelligence level among international students in Jordan's universities, the means, standard deviation (SD), and rank response of participants on measure domains and total measure were determined. Table 3 provides the descriptive statistic means and standard deviation.

Table 3 shows that the highest means among the cultural intelligence component is meta-cognitive cultural intelligence by mean (M= 3.90; SD= 0.55), followed by motivational cultural intelligence by higher mean (M= 3.89; SD= 0.63). The third domain is cognitive cultural intelligence by higher mean (M= 3.77; SD= 0.66). The behavioral cultural intelligence came the last by modern mean (M= 3.49; SD=0.58), while the total score of cultural intelligence is higher by mean (M= 3.75; SD= 0.68).

To answer the second question of how does international students' cultural intelligence differ by gender and by nationality students', Table 4 provides the significant variables for sex and nationality.

Table 3
Descriptive Statistics Means and Standard Deviation

Subscale	Means	Standard Deviation	Rank	Level
Meta-cognitive CQ	3.90	0.55	1	High
Cognitive CQ	3.77	0.66	3	High
Motivational CQ	3.89	0.63	2	High
Behavioral CQ	3.49	0.58	4	Moderate
Total	3.75	0.68		High

Table 4
Significant Variables for Sex and Nationality

Variables			MECQ	CCQ	MoCQ	BCQ	Total
Sex	Male	Mean	3.97	3.78	3.92	3.58	3.78
		SD	0.62	0.66	0.58	0.74	0.56
	Female	Mean	3.86	3.76	3.87	3.43	3.72
		SD	0.54	0.69	0.62	0.58	0.64

Variables			MECQ	CCQ	MoCQ	BCQ	Total
Nationality	American	Mean	4.41	4.26	4.26	3.85	4.18
		SD	0.58	0.64	0.58	0.62	0.56
	Korean	Mean	3.81	3.63	3.69	3.44	3.61
		SD	0.77	0.65	0.51	0.73	0.55
	Chinese	Mean	3.88	3.81	4.06	3.60	3.82
		SD	0.61	0.41	0.48	0.65	0.48
	Malaysian	Mean	3.60	3.47	3.60	3.16	3.43
		SD	0.61	0.55	0.55	0.68	0.51
	European	Mean	4.07	3.95	4.10	3.68	3.93
		SD	0.54	0.60	0.52	0.56	0.43

Table 5
MANOVA Analysis for Gender and Nationality

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Sex	MeCI	0.510	1	0.510	1.308	0.255
Hotelling's =0.091	MCI	0.040	1	0.040	0.112	0.739
Sig.=	MoCI	0.306	1	0.306	1.062	0.305
	BCI	0.240	1	0.240	0.570	0.452
Nationality	MeCI	9.751	4	0.243	6.249	0.001
Hotelling's =0.060	MCI	9.700	4	2.245	6.862	0.001
Sig.=0.190	MoCI	9.544	4	2.386	8.269	0.001
	BCI	8.594	4	2.148	5.109	0.001

Note. MeCI = Metacognitive Cultural Intelligence; MCI = Cognitive Cultural Intelligence; MoCI = Motivation Cultural Intelligence; and Behavioral Cultural Intelligence = BCI.

As shown in Table 4, significant differences exist in means and standard deviation for students' responses on total cultural intelligence components and on total cultural intelligence references to nationality and sex. To identify the differences among students, the researchers used MANOVA. Table 5 provides the MANOVA analysis of the gender and nationality variable.

Table 5 shows the significant differences for total cultural intelligence components that refer to the nationality variable; the F value is (F= 6.249; = 0.001) for Meta-cognitive Cultural Intelligence (MeCI); the F value is (6.862; = 0.001) for Cognitive Cultural Intelligence component (MCI); Motivation Cultural Intelligence component (MoCI) value is (F= 8.269; = 0.001); and the value for Behavioral Cultural Intelligence (BCI) is (F= 5.109; = 0.001). To discover the significant differences on the (MeCI), the researcher used the Scheffe test for post comparisons: Malaysians and Americans favor Americans, and Malaysians and Europeans favor the Europeans. For the (MCI) component: Koreans vs. Americans favor Americans, and Americans vs Europeans favor Americans. For the (MoCI) component Koreans vs. Americans favors Americans, Americans vs. Europeans favors Americans, Korans vs. Europeans favors Europeans, and Malaysians vs. Europeans favors Europeans.

For the BCI component, Malaysians and Americans favor Americans and Malaysians vs Europeans favor Europeans. Table 6 provides 2-way ANOVA on total cultural intelligence base on sex and nationality.

Table 6 shows no differences on all cultural intelligence references to sex. While significant differences are shown on total cultural intelligence reference to nationality, the F value was (F= 9.097; = 0.001). To determine the significant differences, the researcher used the Scheffe test for post comparisons (Malaysian and American favor American),

Korans and American favor American, and Malaysian vs. European favors European.

Table 6
Present 2-WAY- ANOVA on total cultural intelligence base on sex and nationality

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Gender	0.236	1	0.236	0.940	0.334
Nationality	9.134	4	2.283	9.097	0.001

Discussion

This study investigated the level of cultural intelligence among international students and whether significant statistical differences exist in the students' cultural intelligence. Data analysis shows that meta-cognitive cultural intelligence scores higher than other CQ domains that refer to cultural experiences and knowledge. The findings revealed that meta-cognitive domain is dependent on the student's openness to experiences and knowledge of other cultures. These findings are consistent with Crowne's (2008) results that showed a strong relationship between meta-cognitive cultural intelligence and cultural exposure. The most interesting finding shows the nationality variable where significance is at α =.000; therefore, American students score higher than other nationalities on total cultural intelligence. These findings may be because American students have more interaction with different cultures than other nationalities because of travel abroad, jobs or suppliers, student exchange program, or short visits to international organizations. This finding supports Yordonova (2011) and Crowne's (2008) studies that revealed that multicultural influences cultural understanding, and, thus, there is an existence of a relationship between multicultural and level of cultural intelligence. Another explanation, according to Balogh, Gaal,

and Szabo (2011) is that "flexible culture type [such as that of Americans] reacts to changes in the environment almost instantly" (p. 108).

The study results show most European Union students score higher on total CQ, coming in second after American students. This study finding likely is attributed to European countries' openness to each other more than other nations. This openness allows Europeans to interact with each other more easily and gain more experience due to the interaction and ability to move from country to country without border restrictions. This finding is supported by Ang, Van Dyne, and Koh's (2005) research results that show openness to experience is a necessary personality characteristic that is related to a person's capability to function effectively in diverse cultural settings (CQ).

Recommendations and Limitations

The researcher believes that the participants' experience described in this study represent what might occur in any university in Jordan. Additional research is needed to add or refute the study conclusions. The study was conducted in northern Jordan in the same universities' district, and this could be a potential deficiency. Further studies are needed from different university districts to analyze a broad base of international students. The expectation, environment, and socioeconomic statutes may not be the same from different country settings. The cultural intelligence, therefore, of international students may vary. Although this study was conducted on only international students from the United States, Korea, the European Union, China, and Malaysia, further studies should be conducted on international students with different nationalities. Because this research used quantitative, qualitative methods should also be utilized. Although we are satisfied with the facts and findings of this study, the limitation of quantitative studies is recognized. A

broad quantitative survey many further assist in the understanding of the cultural intelligence of international students regardless of the limitations found in this study. The research believes that findings add to our understanding of cultural intelligence of International Students. These findings need to receive attention on a regular basis to understand how cultural intelligence makes international students successful in their daily lives.

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